

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method comprising:

receiving a data frame on a receive port from a first device connected to a network, said data frame including a source media access control (MAC) address for said first device and a destination MAC address for a second device connected to said network;

determining from said address the location of a target port corresponding to said second device;

forwarding said data frame to a target port corresponding to said second device; and

learning said source MAC address locally to said target port.

2. (Previously presented) The method of claim 1, said learning step comprising:

determining whether said source MAC address is present in a database local to said target port; and

recording said source MAC address along with a port connected to said first device in said local database if not present.

3. (Original) The method of claim 1, further comprising performing frame forwarding using said locally-learned MAC address.

4. (Original) The method of claim 2, further comprising aging said MAC address locally.

5. (Original) The method of claim 2, further comprising:
bundling a pre-determined number of said MAC addresses into a reply in response to a report request from a control point; and
transmitting said reply to said control point.

6. (Original) The method of claim 5, further comprising:
compiling a plurality of said replies into an aggregate database; and
reporting said aggregate database to a network user or manager.

7. (Original) The method of claim 5, wherein said report request is issued at time intervals which are configurable by a network user.

8. (Currently amended) A network switch comprising:
a target port connected to a destination network device;
processors and a MAC address database local to said target port;

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an ingress port having a local processor which identifies from a destination address contained in said frame a target port, and forwards said frame to said target port;

said processors programmed to perform MAC address learning locally to said target port source addresses and source ports contained in a frame received from said ingress port.

9. (Currently amended) A network switch comprising:

a target port connected to a network device;

processors and a MAC address database local to said target port;

an ingress port having a local processor which forwards a frame received on said ingress port to said target port identified by said destination address;

said processors programmed to perform MAC address learning locally to said target port of source addresses and source ports contained in frames received by said ingress port.

10. (Original) The network switch of claim 8, said processors programmed to perform frame forwarding using said local MAC address database.

11. (Original) The network switch of claim 8, said processors programmed to perform aging of said local MAC address database.

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12. (Original) The network switch of claim 8, a database-handling processor of said processors programmed to bundle a pre-determined number of said MAC addresses into a reply in response to a report request from a control point included on said switch, and transmit said reply to said control point.

13. (Original) The network switch of claim 12, said control point compiling a plurality of said replies into an aggregate database and reporting said aggregate database to a network user or manager.

14. (Currently amended) A computer-usable medium storing computer-executable instructions, said instructions when executed by a processor implementing a method comprising:

receiving a data frame on a receive port from a first device connected to a network, said data frame including a source media access control (MAC) address for said first device and a destination MAC address for a second device connected to said network;

forwarding said data frame to a target port identified by said destination address corresponding to said second device; and

learning said source MAC address locally to said target port when said frame is received at said target port.

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15. (Original) The computer-usable medium of claim 14, said learning step comprising:

determining whether said source MAC address is present in a database local to said target port; and

recording said source MAC address in said local database if not present.

16. (Original) The computer-usable medium on claim 14, said method further comprising performing frame forwarding using said locally-learned MAC address.

17. (Original) The computer-usable medium of claim 14, said method further comprising aging said MAC address locally.

18. (Original) The computer-usable medium of claim 14, said method further comprising:

bundling a pre-determined number of said MAC addresses into a reply in response to a report request from a control point; and

transmitting said reply to said control point.

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19. (Original) The computer-usable medium of claim 18, said method further comprising:

compiling a plurality of said replies into an aggregate database; and

reporting said aggregate database to a network user or manager.

20. (Original) The computer-usable medium of claim 18, wherein said report request is issued at time intervals which are configurable by a network user.

21. (New) The network switch of claim 8, wherein said ingress port local processor floods a plurality of ports of said switch with said frame when said local processor cannot determine a target port from said destination address.